

## CLAIMS

What is claimed is:

1           1.     Apparatus for disengaging the drive wheel of a transfer cylinder  
2     from the drive wheel of an impression cylinder, said drive wheel of said transfer cylinder  
3     engaging said drive wheel of said impression cylinder when said transfer cylinder is in a  
4     thrown-on position, said drive wheel of said transfer cylinder further engaging a drive  
5     wheel of a forme cylinder, said apparatus comprising:

6                 a gear wheel chain which meshes with the drive wheels of the forme  
7     cylinder and the impression cylinder,

8                 means for pivoting said transfer cylinder to a thrown-off position wherein  
9     said drive wheel of said transfer cylinder is disengaged from said drive wheel of said  
10    impression cylinder, and

11                a transfer element connected to said transfer cylinder and to said gear  
12    wheel chain so that said gear wheel chain produces a counter-rotation in said transfer  
13    cylinder synchronously with the pivoting of said transfer cylinder, said counter-rotation  
14    being opposite to said pivoting, whereby,

15                the drive wheel of the transfer cylinder can disengage the drive wheel of  
16    the impression cylinder without increasing tension on gear teeth of the respective drive  
17    wheels.

1           2.     An apparatus as in claim 1 wherein said gear wheel chain  
2     comprises at least one planetary wheel, said transfer element causing said at least one  
3     planetary wheel to pivot synchronously with the pivoting of the transfer cylinder.

1           3.     An apparatus as in claim 1 wherein said transfer element  
2 comprises one of a linkage, a drive, a control gear, and an electrical apparatus.

1           4.     An apparatus as in claim 1 further comprising an eccentric bearing  
2 ring on said transfer cylinder and a pivoting lever carrying said planetary wheel, said  
3 transfer element being arranged on said bearing ring and on said pivoting lever.

1           5.     An apparatus as in claim 1 further comprising a control gear which  
2 actuates said transfer element. 6. An apparatus as in claim 1 further comprising a drive  
3 which actuates said actuating element, said drive being pivotably attached to a frame.

1           6.     An apparatus as in claim 1 further comprising a drive which  
2 actuates said actuating element, said drive being pivotably attached to a frame.

1           7.     An apparatus as in claim 1 wherein said gear wheel chain  
2 comprises an intermediate wheel which is in permanent drive connection with the drive  
3 wheel of the impression cylinder.

1           8.     An apparatus as in claim 1 wherein said transfer cylinder and said  
2 forme cylinder form a first ink-transferring pair of cylinders, said apparatus further  
3 comprising a forme cylinder which cooperates with said impression cylinder to form a  
4 second ink transferring pair of cylinders.

1           9.     An apparatus as in claim 2 wherein said gear wheel chain  
2 comprises a central wheel and an outer wheel driven by said central wheel via said

3 planetary wheel, said planetary wheel engaging at least one of said central wheel and  
4 said outer wheel without flank contact when said transfer cylinder is in the thrown-on  
5 position.

1 10. An apparatus as in claim 1 wherein the drive wheels of the transfer  
2 cylinder and the impression cylinder have teeth with a tooth height, the transfer cylinder  
3 and the impression cylinder in the thrown-off position being separated by a printing gap  
4 which is at least 25% larger than the tooth height.

1 11. An apparatus as in claim 2 wherein said gear wheel chain has an  
2 overall gear ratio which cannot be changed by said planetary wheel.

1 12. Apparatus as in claim 1 wherein said gear wheel chain comprises a  
2 drive wheel of an additional form cylinder which engages said drive wheel of said  
3 impression cylinder.